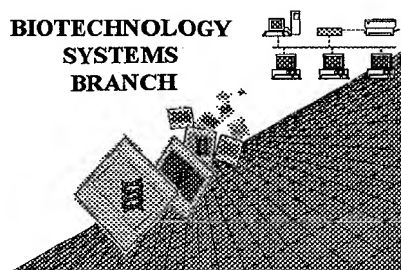


# **RAW SEQUENCE LISTING** **ERROR REPORT**

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following CRF diskette:

Application Serial Number:

09/084,471  
01PE

Art Unit / Team No. :

Date Processed by STIC:

6/4/98

**THE ATTACHED PRINTOUT EXPLAINS THE ERRORS DETECTED.**

**PLEASE BE SURE TO FORWARD THIS INFORMATION TO THE APPLICANTS BY EITHER:**

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANTS ALONG WITH A NOTICE TO COMPLY or,**
- 2) CALLING APPLICANTS AND FAXING THEM A COPY OF THE PRINTOUT WITH A NOTICE TO COMPLY**

**THIS WILL INSURE THAT THE NEXT SUBMISSION RECEIVED FROM THEM WILL BE ERROR FREE.**

**IF YOU HAVE ANY FURTHER QUESTIONS, PLEASE CALL:**

**ARTI SHAH 703-308-4212**

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471

DATE: 06/04/98  
TIME: 15:52:12

INPUT SET: S26434.raw

This Raw Listing contains the General  
Information Section and those Sequences  
containing ERRORS.

SEQUENCE LISTING

(1) General Information

(i) APPLICANT: Murphy, Patricia  
White, Marga  
Olson, Sheri  
Yoshikawa, Matthew  
Jackson, Geoffrey  
Eskanderi, Tara  
Schryer, Brenda  
Park, Michael

Does Not Comply  
Corrected Diskette Needed

(ii) TITLE OF THE INVENTION: NOVEL CODING SEQUENCE HAPLOTYPES  
OF THE HUMAN BRCA2 GENE

(iii) NUMBER OF SEQUENCES: 111 (see next page)

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Howrey & Simon  
(B) STREET: 1299 Pennsylvania Avenue N.W.  
(C) CITY: Washington  
(D) STATE: DC  
(E) COUNTRY: USA  
(F) ZIP: 20004

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Diskette  
(B) COMPUTER: IBM Compatible  
(C) OPERATING SYSTEM: DOS  
(D) SOFTWARE: FastSEQ for Windows Version 2.0

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER:  
(B) FILING DATE:  
(C) CLASSIFICATION:

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER:  
(B) FILING DATE:

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Halluin, Albert P

IMPORTANT:  
This file was not  
saved in ASCII (DOS)  
text, required by  
Sequence Rules. Please  
ensure your corrected  
disk file is saved  
in ASCII text, or  
the PTO will not  
process it.

09/084,471

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(A) NAME/KEY:

(B) LOCATION:

(D) OTHER INFORMATION: 2F primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

TGAGTTTAC CTCAGTCACA

20

WHERE IS SEQ ID NO:15?

(2) INFORMATION FOR SEQ ID NO:16:

1 Sequence 15 is deliberately omitted, use the format:

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

This sequence has been deliberately omitted

Leave (iii) NUMBER OF SEQUENCES: response at '11'

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:13

INPUT SET: S26434.raw

46 (B) REGISTRATION NUMBER: 25,227  
47 (C) REFERENCE/DOCKET NUMBER: 5371.31.US02  
48  
49 (ix) TELECOMMUNICATION INFORMATION:  
50 (A) TELEPHONE: 650-463-8109  
51 (B) TELEFAX: 650-463-8400  
52 (C) TELEX:  
53  
54

## ERRORED SEQUENCES FOLLOW:

6733 (2) INFORMATION FOR SEQ ID NO:14:  
6734  
6735 (i) SEQUENCE CHARACTERISTICS:  
6736 (A) LENGTH: 20 base pairs  
6737 (B) TYPE: nucleic acid  
6738 (C) STRANDEDNESS: single  
6739 (D) TOPOLOGY: linear  
6740  
6741 (ix) FEATURE: *← must follow heading. It must appear on the text will be considered*  
--> 6742 (A) NAME/KEY:  
--> 6743 (B) LOCATION:  
--> 6744 (D) OTHER INFORMATION: 2F primer  
6745 *these are subheadings of (ix) FEATURE*  
6746 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:  
6747  
6748 TGAGTTTAC CTCAGTCACA  
6749

*(Edit Globally)*

20

OK --> 6750 (2) INFORMATION FOR SEQ ID NO:16:  
6751  
6752 (i) SEQUENCE CHARACTERISTICS:  
6753 (A) LENGTH: 41 base pairs  
6754 (B) TYPE: nucleic acid  
6755 (C) STRANDEDNESS: single  
6756 (D) TOPOLOGY: linear  
6757  
6758  
6759 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:  
6760  
6761 CAGGAAACAG CTATGACCCCT GTGACGTACT GGGTTTTTAC C  
6762

41

6763 (2) INFORMATION FOR SEQ ID NO:17:  
6764  
6765 (i) SEQUENCE CHARACTERISTICS:  
6766 (A) LENGTH: 24 base pairs  
6767 (B) TYPE: nucleic acid  
6768 (C) STRANDEDNESS: single

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:15

INPUT SET: S26434.raw

6769 (D) TOPOLOGY: linear  
6770  
6771  
--> 6772 (A) NAME/KEY:  
--> 6773 (B) LOCATION:  
--> 6774 (D) OTHER INFORMATION: 3FII primer  
6775  
6776 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:  
6777  
6778 GATCTTTAAC TGTTCTGGGT CACA  
6779

24

6780 (2) INFORMATION FOR SEQ ID NO:18:  
6781  
6782 (i) SEQUENCE CHARACTERISTICS:  
6783 (A) LENGTH: 22 base pairs  
6784 (B) TYPE: nucleic acid  
6785 (C) STRANDEDNESS: single  
6786 (D) TOPOLOGY: linear  
6787  
6788  
--> 6789 (A) NAME/KEY:  
--> 6790 (B) LOCATION:  
--> 6791 (D) OTHER INFORMATION: 3RII primer  
6792  
6793 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:  
6794  
6795 CCCAGCATGA CACAATTAAT GA  
6796

22

6797 (2) INFORMATION FOR SEQ ID NO:19:  
6798  
6799 (i) SEQUENCE CHARACTERISTICS:  
6800 (A) LENGTH: 44 base pairs  
6801 (B) TYPE: nucleic acid  
6802 (C) STRANDEDNESS: single  
6803 (D) TOPOLOGY: linear  
6804  
6805  
--> 6806 (A) NAME/KEY:  
--> 6807 (B) LOCATION:  
--> 6808 (D) OTHER INFORMATION: 4F/M 13F primer  
6809  
6810 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:  
6811  
6812 TGTAAAACGA CGGCCAGTAG AATGCAAATT TATAATCCAG AGTA  
6813

44

6814 (2) INFORMATION FOR SEQ ID NO:20:  
6815  
6816 (i) SEQUENCE CHARACTERISTICS:  
6817 (A) LENGTH: 22 base pairs  
6818 (B) TYPE: nucleic acid

ETC.

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:16

INPUT SET: S26434.raw

6819 (C) STRANDEDNESS: single  
6820 (D) TOPOLOGY: linear  
6821  
6822  
--> 6823 (A) NAME/KEY:  
--> 6824 (B) LOCATION:  
--> 6825 (D) OTHER INFORMATION: 4R-1A primer  
6826  
6827 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:  
6828  
6829 ATCAGATTCA TCTTTATAGA AC  
6830

22

---

6831 (2) INFORMATION FOR SEQ ID NO:21:  
6832  
6833 (i) SEQUENCE CHARACTERISTICS:  
6834 (A) LENGTH: 40 base pairs  
6835 (B) TYPE: nucleic acid  
6836 (C) STRANDEDNESS: single  
6837 (D) TOPOLOGY: linear  
6838  
6839  
--> 6840 (A) NAME/KEY:  
--> 6841 (B) LOCATION:  
--> 6842 (D) OTHER INFORMATION: 5+6F/M13F primer  
6843  
6844 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:  
6845  
6846 TGTAACACGA CGGCCAGTTG TGTGGCATT TTAACATCA  
6847

40

---

6848 (2) INFORMATION FOR SEQ ID NO:22:  
6849  
6850 (i) SEQUENCE CHARACTERISTICS:  
6851 (A) LENGTH: 38 base pairs  
6852 (B) TYPE: nucleic acid  
6853 (C) STRANDEDNESS: single  
6854 (D) TOPOLOGY: linear  
6855  
6856  
--> 6857 (A) NAME/KEY:  
--> 6858 (B) LOCATION:  
--> 6859 (D) OTHER INFORMATION: 5+6R/M13R primer  
6860  
6861 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:  
6862  
6863 CAGGAAACAG CTATGACCCA GGGCAAAGGT ATAACGCT  
6864

38

---

6865 (2) INFORMATION FOR SEQ ID NO:23:  
6866  
6867 (i) SEQUENCE CHARACTERISTICS:  
6868 (A) LENGTH: 38 base pairs

INPUT SET: S26434.raw

6869 (B) TYPE: nucleic acid  
6870 (C) STRANDEDNESS: single  
6871 (D) TOPOLOGY: linear  
6872  
6873  
--> 6874 (A) NAME/KEY:  
--> 6875 (B) LOCATION:  
--> 6876 (D) OTHER INFORMATION: 7F/M13F primer  
6877  
6878 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:  
6879  
6880 TGTAACACGA CGGCCAGTTA AGTGAAATAA AGAGTGAA  
6881

38

---

6882 (2) INFORMATION FOR SEQ ID NO:24:  
6883  
6884 (i) SEQUENCE CHARACTERISTICS:  
6885 (A) LENGTH: 36 base pairs  
6886 (B) TYPE: nucleic acid  
6887 (C) STRANDEDNESS: single  
6888 (D) TOPOLOGY: linear  
6889  
6890  
--> 6891 (A) NAME/KEY:  
--> 6892 (B) LOCATION:  
--> 6893 (D) OTHER INFORMATION: 7R/M13R primer  
6894  
6895 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:  
6896  
6897 CAGGAAACAG CTATGACCAG AAGTATTAGA GATGAC  
6898

36

---

6899 (2) INFORMATION FOR SEQ ID NO:25:  
6900  
6901 (i) SEQUENCE CHARACTERISTICS:  
6902 (A) LENGTH: 40 base pairs  
6903 (B) TYPE: nucleic acid  
6904 (C) STRANDEDNESS: single  
6905 (D) TOPOLOGY: linear  
6906  
6907  
--> 6908 (A) NAME/KEY:  
--> 6909 (B) LOCATION:  
--> 6910 (D) OTHER INFORMATION: 8F/M13F primer  
6911  
6912 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:  
6913  
6914 TGTAACACGA CGGCCAGTGC CATATCTTAC CACCTTGTA  
6915

40

---

6934 (2) INFORMATION FOR SEQ ID NO:27:  
6935  
6936 (i) SEQUENCE CHARACTERISTICS:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:19

INPUT SET: S26434.raw

6937 (A) LENGTH: 19 base pairs  
6938 (B) TYPE: nucleic acid  
6939 (C) STRANDEDNESS: single  
6940 (D) TOPOLOGY: linear  
6941  
6942  
--> 6943 (A) NAME/KEY:  
--> 6944 (B) LOCATION:  
--> 6945 (D) OTHER INFORMATION: 8RIA primer  
6946  
6947 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:  
6948  
6949 AATTGTTAGC AATTTCAAC  
6950

19

---

6951 (2) INFORMATION FOR SEQ ID NO:28:  
6952  
6953 (i) SEQUENCE CHARACTERISTICS:  
6954 (A) LENGTH: 40 base pairs  
6955 (B) TYPE: nucleic acid  
6956 (C) STRANDEDNESS: single  
6957 (D) TOPOLOGY: linear  
6958  
6959  
--> 6960 (A) NAME/KEY:  
--> 6961 (B) LOCATION:  
--> 6962 (D) OTHER INFORMATION: 9F/M13F primer  
6963  
6964 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:  
6965  
6966 TGTAACACGA CGGCCAGTTG GACCTAGGTT GATTGCAGAT  
6967

40

---

6968 (2) INFORMATION FOR SEQ ID NO:29:  
6969  
6970 (i) SEQUENCE CHARACTERISTICS:  
6971 (A) LENGTH: 40 base pairs  
6972 (B) TYPE: nucleic acid  
6973 (C) STRANDEDNESS: single  
6974 (D) TOPOLOGY: linear  
6975  
6976  
--> 6977 (A) NAME/KEY:  
--> 6978 (B) LOCATION:  
--> 6979 (D) OTHER INFORMATION: 9R/M13R primer  
6980  
6981 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:  
6982  
6983 CAGGAAACAG CTATGACCTA AACTGAGATC ACGGGTGACA  
6984

40

---

6985 (2) INFORMATION FOR SEQ ID NO:30:  
6986



RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:21

INPUT SET: S26434.raw

6987 (i) SEQUENCE CHARACTERISTICS:  
6988 (A) LENGTH: 24 base pairs  
6989 (B) TYPE: nucleic acid  
6990 (C) STRANDEDNESS: single  
6991 (D) TOPOLOGY: linear  
6992  
6993  
--> 6994 (A) NAME/KEY:  
--> 6995 (B) LOCATION:  
--> 6996 (D) OTHER INFORMATION: 10AF primer  
6997  
6998 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:  
6999  
7000 GAATAATATA AATTATATGG CTTA  
7001

24

---

7002 (2) INFORMATION FOR SEQ ID NO:31:  
7003  
7004 (i) SEQUENCE CHARACTERISTICS:  
7005 (A) LENGTH: 37 base pairs  
7006 (B) TYPE: nucleic acid  
7007 (C) STRANDEDNESS: single  
7008 (D) TOPOLOGY: linear  
7009  
7010  
--> 7011 (A) NAME/KEY:  
--> 7012 (B) LOCATION:  
--> 7013 (D) OTHER INFORMATION: 10AR/M13R primer  
7014  
7015 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:  
7016  
7017 CAGGAAACAG CTATGACCCC TAGTCTTGCT AGTTCTT  
7018

37

---

7019 (2) INFORMATION FOR SEQ ID NO:32:  
7020  
7021 (i) SEQUENCE CHARACTERISTICS:  
7022 (A) LENGTH: 42 base pairs  
7023 (B) TYPE: nucleic acid  
7024 (C) STRANDEDNESS: single  
7025 (D) TOPOLOGY: linear  
7026  
7027  
--> 7028 (A) NAME/KEY:  
--> 7029 (B) LOCATION:  
--> 7030 (D) OTHER INFORMATION: 10BF/M13F primer  
7031  
7032 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:  
7033  
7034 TGTAACACGA CGGCCAGTAR CTGAAGTGGA ACCAAATGAT AC  
7035

42

---

7036 (2) INFORMATION FOR SEQ ID NO:33:

INPUT SET: S26434.raw

7037  
7038 (i) SEQUENCE CHARACTERISTICS:  
7039 (A) LENGTH: 44 base pairs  
7040 (B) TYPE: nucleic acid  
7041 (C) STRANDEDNESS: single  
7042 (D) TOPOLOGY: linear  
7043  
7044  
--> 7045 (A) NAME/KEY:  
--> 7046 (B) LOCATION:  
--> 7047 (D) OTHER INFORMATION: 10BR/M13R primer  
7048  
7049 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:  
7050  
7051 CAGGAAACAG CTATGACCAC GTGGCAAAGA ATTCTCTGAA GTAA 44  
7052

---

7071 (2) INFORMATION FOR SEQ ID NO:35:  
7072  
7073 (i) SEQUENCE CHARACTERISTICS:  
7074 (A) LENGTH: 19 base pairs  
7075 (B) TYPE: nucleic acid  
7076 (C) STRANDEDNESS: single  
7077 (D) TOPOLOGY: linear  
7078  
7079  
--> 7080 (A) NAME/KEY:  
--> 7081 (B) LOCATION:  
--> 7082 (D) OTHER INFORMATION: 10CRII primer  
7083  
7084 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:  
7085  
7086 AGACAGAGGT ACCTGAATC 19  
7087

---

7088 (2) INFORMATION FOR SEQ ID NO:36:  
7089  
7090 (i) SEQUENCE CHARACTERISTICS:  
7091 (A) LENGTH: 40 base pairs  
7092 (B) TYPE: nucleic acid  
7093 (C) STRANDEDNESS: single  
7094 (D) TOPOLOGY: linear  
7095  
7096  
--> 7097 (A) NAME/KEY:  
--> 7098 (B) LOCATION:  
--> 7099 (D) OTHER INFORMATION: 11AF-M13 primer  
7100  
7101 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:  
7102  
7103 TGTAACACGA CGGCCAGTTG GTACTTTAAT TTTGTCACTT 40  
7104

---

7105 (2) INFORMATION FOR SEQ ID NO:37:

INPUT SET: S26434.raw

7106  
7107 (i) SEQUENCE CHARACTERISTICS:  
7108 (A) LENGTH: 37 base pairs  
7109 (B) TYPE: nucleic acid  
7110 (C) STRANDEDNESS: single  
7111 (D) TOPOLOGY: linear  
7112  
7113  
--> 7114 (A) NAME/KEY:  
--> 7115 (B) LOCATION:  
--> 7116 (D) OTHER INFORMATION: 11AR-M13 primer  
7117  
7118 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:  
7119  
7120 CAGGAAACAG CTATGACCTG CAGGCATGAC AGAGAAT 37  
7121

---

7122 (2) INFORMATION FOR SEQ ID NO:38:  
7123  
7124 (i) SEQUENCE CHARACTERISTICS:  
7125 (A) LENGTH: 22 base pairs  
7126 (B) TYPE: nucleic acid  
7127 (C) STRANDEDNESS: single  
7128 (D) TOPOLOGY: linear  
7129  
7130  
--> 7131 (A) NAME/KEY:  
--> 7132 (B) LOCATION:  
--> 7133 (D) OTHER INFORMATION: 11BF primer  
7134  
7135 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:  
7136  
7137 AAGAAGCAAA ATGTAATAAG GA 22  
7138

---

7139 (2) INFORMATION FOR SEQ ID NO:39:  
7140  
7141 (i) SEQUENCE CHARACTERISTICS:  
7142 (A) LENGTH: 22 base pairs  
7143 (B) TYPE: nucleic acid  
7144 (C) STRANDEDNESS: single  
7145 (D) TOPOLOGY: linear  
7146  
7147  
--> 7148 (A) NAME/KEY:  
--> 7149 (B) LOCATION:  
--> 7150 (D) OTHER INFORMATION: 11BR primer  
7151  
7152 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:  
7153  
7154 CATTTAAAGC ACATACATCT TG 22  
7155

---

7156 (2) INFORMATION FOR SEQ ID NO:40:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:26

INPUT SET: S26434.raw

7157  
7158  
7159 (i) SEQUENCE CHARACTERISTICS:  
7160 (A) LENGTH: 21 base pairs  
7161 (B) TYPE: nucleic acid  
7162 (C) STRANDEDNESS: single  
7163 (D) TOPOLOGY: linear  
7164  
--> 7165 (A) NAME/KEY:  
--> 7166 (B) LOCATION:  
--> 7167 (D) OTHER INFORMATION: 11CF primer  
7168  
7169 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:  
7170  
7171 TCTAGAGGCA AAGAATCATA C 21  
7172

---

7173 (2) INFORMATION FOR SEQ ID NO:41:  
7174  
7175 (i) SEQUENCE CHARACTERISTICS:  
7176 (A) LENGTH: 22 base pairs  
7177 (B) TYPE: nucleic acid  
7178 (C) STRANDEDNESS: single  
7179 (D) TOPOLOGY: linear  
7180  
7181  
--> 7182 (A) NAME/KEY:  
--> 7183 (B) LOCATION:  
--> 7184 (D) OTHER INFORMATION: 11CR primer  
7185  
7186 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:  
7187  
7188 CAAGATTATT CCTTTCATTA GC 22  
7189

---

7190 (2) INFORMATION FOR SEQ ID NO:42:  
7191  
7192 (i) SEQUENCE CHARACTERISTICS:  
7193 (A) LENGTH: 22 base pairs  
7194 (B) TYPE: nucleic acid  
7195 (C) STRANDEDNESS: single  
7196 (D) TOPOLOGY: linear  
7197  
7198  
--> 7199 (A) NAME/KEY:  
--> 7200 (B) LOCATION:  
--> 7201 (D) OTHER INFORMATION: 11DF primer  
7202  
7203 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:  
7204  
7205 AACCAAAACA CAAATCTAAG AG 22  
7206

---

7207 (2) INFORMATION FOR SEQ ID NO:43:

INPUT SET: S26434.raw

7208  
7209 (i) SEQUENCE CHARACTERISTICS:  
7210 (A) LENGTH: 23 base pairs  
7211 (B) TYPE: nucleic acid  
7212 (C) STRANDEDNESS: single  
7213 (D) TOPOLOGY: linear  
7214  
7215  
--> 7216 (A) NAME/KEY:  
--> 7217 (B) LOCATION:  
--> 7218 (D) OTHER INFORMATION: 11DR primer  
7219  
7220 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:  
7221  
7222 GTCATTTTTA TATGCTGCTT TAC 23  
7223

---

7224 (2) INFORMATION FOR SEQ ID NO:44:  
7225  
7226 (i) SEQUENCE CHARACTERISTICS:  
7227 (A) LENGTH: 21 base pairs  
7228 (B) TYPE: nucleic acid  
7229 (C) STRANDEDNESS: single  
7230 (D) TOPOLOGY: linear  
7231  
7232  
--> 7233 (A) NAME/KEY:  
--> 7234 (B) LOCATION:  
--> 7235 (D) OTHER INFORMATION: 11EF primer  
7236  
7237 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:  
7238  
7239 GGTTTTATAT GGAGACACAG G 21  
7240

---

7241 (2) INFORMATION FOR SEQ ID NO:45:  
7242  
7243 (i) SEQUENCE CHARACTERISTICS:  
7244 (A) LENGTH: 23 base pairs  
7245 (B) TYPE: nucleic acid  
7246 (C) STRANDEDNESS: single  
7247 (D) TOPOLOGY: linear  
7248  
7249  
--> 7250 (A) NAME/KEY:  
--> 7251 (B) LOCATION:  
--> 7252 (D) OTHER INFORMATION: 11ER primer  
7253  
7254 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:  
7255  
7256 GTATTTACAA TTTCAACACA AGC 23  
7257

---

7258 (2) INFORMATION FOR SEQ ID NO:46:

INPUT SET: S26434.raw

7259  
7260  
7261 (i) SEQUENCE CHARACTERISTICS:  
7262 (A) LENGTH: 20 base pairs  
7263 (B) TYPE: nucleic acid  
7264 (C) STRANDEDNESS: single  
7265 (D) TOPOLOGY: linear  
7266  
--> 7267 (A) NAME/KEY:  
--> 7268 (B) LOCATION:  
--> 7269 (D) OTHER INFORMATION: 11FF primer  
7270  
7271 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:  
7272  
7273 ATCACAGTTT TGGAGGTAGC 20  
7274

---

7275 (2) INFORMATION FOR SEQ ID NO:47:  
7276  
7277 (i) SEQUENCE CHARACTERISTICS:  
7278 (A) LENGTH: 21 base pairs  
7279 (B) TYPE: nucleic acid  
7280 (C) STRANDEDNESS: single  
7281 (D) TOPOLOGY: linear  
7282  
7283  
--> 7284 (A) NAME/KEY:  
--> 7285 (B) LOCATION:  
--> 7286 (D) OTHER INFORMATION: 11FR primer  
7287  
7288 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:  
7289  
7290 CTGACTTCCT GATTCTTCTA A 21  
7291

---

7292 (2) INFORMATION FOR SEQ ID NO:48:  
7293  
7294 (i) SEQUENCE CHARACTERISTICS:  
7295 (A) LENGTH: 21 base pairs  
7296 (B) TYPE: nucleic acid  
7297 (C) STRANDEDNESS: single  
7298 (D) TOPOLOGY: linear  
7299  
7300  
--> 7301 (A) NAME/KEY:  
--> 7302 (B) LOCATION:  
--> 7303 (D) OTHER INFORMATION: 11GF primer  
7304  
7305 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:  
7306  
7307 CTCAGATGTT ATTTTCCAAG C 21  
7308

---

7309 (2) INFORMATION FOR SEQ ID NO:49:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:31

INPUT SET: S26434.raw

7310  
7311 (i) SEQUENCE CHARACTERISTICS:  
7312 (A) LENGTH: 21 base pairs  
7313 (B) TYPE: nucleic acid  
7314 (C) STRANDEDNESS: single  
7315 (D) TOPOLOGY: linear  
7316  
7317  
--> 7318 (A) NAME/KEY:  
--> 7319 (B) LOCATION:  
--> 7320 (D) OTHER INFORMATION: 11GR primer  
7321  
7322 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:  
7323  
7324 CTGTTAAATA ACCAGAAGCA C 21  
7325

---

7326 (2) INFORMATION FOR SEQ ID NO:50:  
7327  
7328 (i) SEQUENCE CHARACTERISTICS:  
7329 (A) LENGTH: 18 base pairs  
7330 (B) TYPE: nucleic acid  
7331 (C) STRANDEDNESS: single  
7332 (D) TOPOLOGY: linear  
7333  
7334  
--> 7335 (A) NAME/KEY:  
--> 7336 (B) LOCATION:  
--> 7337 (D) OTHER INFORMATION: 11HF primer  
7338  
7339 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:  
7340  
7341 AGGTAGACAG CAGCAAGC 18  
7342

---

7361 (2) INFORMATION FOR SEQ ID NO:52:  
7362  
7363 (i) SEQUENCE CHARACTERISTICS:  
7364 (A) LENGTH: 21 base pairs  
7365 (B) TYPE: nucleic acid  
7366 (C) STRANDEDNESS: single  
7367 (D) TOPOLOGY: linear  
7368  
7369  
--> 7370 (A) NAME/KEY:  
--> 7371 (B) LOCATION:  
--> 7372 (D) OTHER INFORMATION: 11IF primer  
7373  
7374 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:  
7375  
7376 TGCAGAGGTA CATCCAATAA G 21  
7377

---

7378 (2) INFORMATION FOR SEQ ID NO:53:

INPUT SET: S26434.raw

7379  
7380  
7381 (i) SEQUENCE CHARACTERISTICS:  
7382 (A) LENGTH: 21 base pairs  
7383 (B) TYPE: nucleic acid  
7384 (C) STRANDEDNESS: single  
7385 (D) TOPOLOGY: linear  
7386  
--> 7387 (A) NAME/KEY:  
--> 7388 (B) LOCATION:  
--> 7389 (D) OTHER INFORMATION: 11IR primer  
7390  
7391 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:  
7392  
7393 GATCAGTAAA TAGCAAGTCC G 21  
7394

---

7395 (2) INFORMATION FOR SEQ ID NO:54:  
7396  
7397 (i) SEQUENCE CHARACTERISTICS:  
7398 (A) LENGTH: 23 base pairs  
7399 (B) TYPE: nucleic acid  
7400 (C) STRANDEDNESS: single  
7401 (D) TOPOLOGY: linear  
7402  
7403  
--> 7404 (A) NAME/KEY:  
--> 7405 (B) LOCATION:  
--> 7406 (D) OTHER INFORMATION: 11JF primer  
7407  
7408 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:  
7409  
7410 TACTGAAAAT GAAGATAACA AAT 23  
7411

---

7412 (2) INFORMATION FOR SEQ ID NO:55:  
7413  
7414 (i) SEQUENCE CHARACTERISTICS:  
7415 (A) LENGTH: 22 base pairs  
7416 (B) TYPE: nucleic acid  
7417 (C) STRANDEDNESS: single  
7418 (D) TOPOLOGY: linear  
7419  
7420  
--> 7421 (A) NAME/KEY:  
--> 7422 (B) LOCATION:  
--> 7423 (D) OTHER INFORMATION: !!JR primer  
7424  
7425 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:  
7426  
7427 ATTTTGTCTTCT TTCTTATGTC AG 22  
7428

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7429 (2) INFORMATION FOR SEQ ID NO:56:



RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:34

INPUT SET: S26434.raw

7430  
7431  
7432 (i) SEQUENCE CHARACTERISTICS:  
7433 (A) LENGTH: 35 base pairs  
7434 (B) TYPE: nucleic acid  
7435 (C) STRANDEDNESS: single  
7436 (D) TOPOLOGY: linear  
7437  
--> 7438 (A) NAME/KEY:  
--> 7439 (B) LOCATION:  
--> 7440 (D) OTHER INFORMATION: 11KF-M13 primer  
7441  
7442 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:  
7443  
7444 TGTAACACGA CGGCCAGTCT ACTAACACGG AGCAA 35  
7445

---

7446 (2) INFORMATION FOR SEQ ID NO:57:  
7447  
7448 (i) SEQUENCE CHARACTERISTICS:  
7449 (A) LENGTH: 35 base pairs  
7450 (B) TYPE: nucleic acid  
7451 (C) STRANDEDNESS: single  
7452 (D) TOPOLOGY: linear  
7453  
7454  
--> 7455 (A) NAME/KEY:  
--> 7456 (B) LOCATION:  
--> 7457 (D) OTHER INFORMATION: 11KR-M13 primer  
7458  
7459 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:  
7460  
7461 CAGGAAACAG CTATGACCGT ATGAAAACCC AACAG 35  
7462

---

7463 (2) INFORMATION FOR SEQ ID NO:58:  
7464  
7465 (i) SEQUENCE CHARACTERISTICS:  
7466 (A) LENGTH: 22 base pairs  
7467 (B) TYPE: nucleic acid  
7468 (C) STRANDEDNESS: single  
7469 (D) TOPOLOGY: linear  
7470  
7471  
--> 7472 (A) NAME/KEY:  
--> 7473 (B) LOCATION:  
--> 7474 (D) OTHER INFORMATION: 11LF primer  
7475  
7476 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:  
7477  
7478 CACAAAATAC TGAAAGAAAG TG 22  
7479

---

7480 (2) INFORMATION FOR SEQ ID NO:59:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:36

INPUT SET: S26434.raw

7481  
7482  
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--> 7489  
--> 7490  
--> 7491  
7492  
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7494  
7495  
7496

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 19 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(A) NAME/KEY:  
(B) LOCATION:  
(D) OTHER INFORMATION: 11LR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:  
GGCACCACAG TCTCAATAG 19

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7497  
7498  
7499  
7500  
7501  
7502  
7503  
7504  
7505  
--> 7506  
--> 7507  
--> 7508  
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7513

(2) INFORMATION FOR SEQ ID NO:60:  
(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 20 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(A) NAME/KEY:  
(B) LOCATION:  
(D) OTHER INFORMATION: 11MF primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:  
GCAAAGACCC TAAAGTACAG 20

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7514  
7515  
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7518  
7519  
7520  
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7522  
--> 7523  
--> 7524  
--> 7525  
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7529  
7530

(2) INFORMATION FOR SEQ ID NO:61:  
(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 22 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(A) NAME/KEY:  
(B) LOCATION:  
(D) OTHER INFORMATION: 11MR primer

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:  
CATCAAATAT TCCTTCTCTA AG 22

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7531

(2) INFORMATION FOR SEQ ID NO:62:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:38

INPUT SET: S26434.raw

7532  
7533 (i) SEQUENCE CHARACTERISTICS:  
7534 (A) LENGTH: 35 base pairs  
7535 (B) TYPE: nucleic acid  
7536 (C) STRANDEDNESS: single  
7537 (D) TOPOLOGY: linear  
7538  
7539  
--> 7540 (A) NAME/KEY:  
--> 7541 (B) LOCATION:  
--> 7542 (D) OTHER INFORMATION: 11NF-M13 primer  
7543  
7544 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:  
7545  
7546 TGTAACACGA CGGCCAGTGA AAATTCAGCC TTAGC 35  
7547

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7548 (2) INFORMATION FOR SEQ ID NO:63:  
7549  
7550 (i) SEQUENCE CHARACTERISTICS:  
7551 (A) LENGTH: 35 base pairs  
7552 (B) TYPE: nucleic acid  
7553 (C) STRANDEDNESS: single  
7554 (D) TOPOLOGY: linear  
7555  
7556  
--> 7557 (A) NAME/KEY:  
--> 7558 (B) LOCATION:  
--> 7559 (D) OTHER INFORMATION: 11NR-M13 primer  
7560  
7561 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:  
7562  
7563 CAGGAAACAG CTATGACCAT CAGAATGGTA GGAAT 35  
7564

---

7565 (2) INFORMATION FOR SEQ ID NO:64:  
7566  
7567 (i) SEQUENCE CHARACTERISTICS:  
7568 (A) LENGTH: 22 base pairs  
7569 (B) TYPE: nucleic acid  
7570 (C) STRANDEDNESS: single  
7571 (D) TOPOLOGY: linear  
7572  
7573  
--> 7574 (A) NAME/KEY:  
--> 7575 (B) LOCATION:  
--> 7576 (D) OTHER INFORMATION: 11OF primer  
7577  
7578 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:  
7579  
7580 GTACTATAGC TGAAAATGAC AA 22  
7581

---

7582 (2) INFORMATION FOR SEQ ID NO:65:

INPUT SET: S26434.raw

7583  
7584  
7585 (i) SEQUENCE CHARACTERISTICS:  
7586 (A) LENGTH: 20 base pairs  
7587 (B) TYPE: nucleic acid  
7588 (C) STRANDEDNESS: single  
7589 (D) TOPOLOGY: linear  
7590  
--> 7591 (A) NAME/KEY:  
--> 7592 (B) LOCATION:  
--> 7593 (D) OTHER INFORMATION: 11OR primer  
7594  
7595 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:  
7596  
7597 ACCACTGGCT ATCCTAAATG 20  
7598

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7599 (2) INFORMATION FOR SEQ ID NO:66:  
7600  
7601 (i) SEQUENCE CHARACTERISTICS:  
7602 (A) LENGTH: 20 base pairs  
7603 (B) TYPE: nucleic acid  
7604 (C) STRANDEDNESS: single  
7605 (D) TOPOLOGY: linear  
7606  
7607  
--> 7608 (A) NAME/KEY:  
--> 7609 (B) LOCATION:  
--> 7610 (D) OTHER INFORMATION: 11PF primer  
7611  
7612 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:  
7613  
7614 TGAAGATATT TGCCTTGAGG 20  
7615

---

7616 (2) INFORMATION FOR SEQ ID NO:67:  
7617  
7618 (i) SEQUENCE CHARACTERISTICS:  
7619 (A) LENGTH: 20 base pairs  
7620 (B) TYPE: nucleic acid  
7621 (C) STRANDEDNESS: single  
7622 (D) TOPOLOGY: linear  
7623  
7624  
--> 7625 (A) NAME/KEY:  
--> 7626 (B) LOCATION:  
--> 7627 (D) OTHER INFORMATION: 11PR primer  
7628  
7629 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:  
7630  
7631 GTCAGCAAAA ACCTTATGTG 20  
7632

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7633 (2) INFORMATION FOR SEQ ID NO:68:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:41

INPUT SET: S26434.raw

7634  
7635 (i) SEQUENCE CHARACTERISTICS:  
7636 (A) LENGTH: 21 base pairs  
7637 (B) TYPE: nucleic acid  
7638 (C) STRANDEDNESS: single  
7639 (D) TOPOLOGY: linear  
7640  
7641  
--> 7642 (A) NAME/KEY:  
--> 7643 (B) LOCATION:  
--> 7644 (D) OTHER INFORMATION: 11QF primer  
7645  
7646 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:  
7647  
7648 ACGAAAATTA TGGCAGGTTG T 21  
7649

---

7650 (2) INFORMATION FOR SEQ ID NO:69:  
7651  
7652 (i) SEQUENCE CHARACTERISTICS:  
7653 (A) LENGTH: 21 base pairs  
7654 (B) TYPE: nucleic acid  
7655 (C) STRANDEDNESS: single  
7656 (D) TOPOLOGY: linear  
7657  
7658  
--> 7659 (A) NAME/KEY:  
--> 7660 (B) LOCATION:  
--> 7661 (D) OTHER INFORMATION: 11QR primer  
7662  
7663 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:  
7664  
7665 CTTGTCTTGC GTTTTGTAAT G 21  
7666

---

7667 (2) INFORMATION FOR SEQ ID NO:70:  
7668  
7669 (i) SEQUENCE CHARACTERISTICS:  
7670 (A) LENGTH: 20 base pairs  
7671 (B) TYPE: nucleic acid  
7672 (C) STRANDEDNESS: single  
7673 (D) TOPOLOGY: linear  
7674  
7675  
--> 7676 (A) NAME/KEY:  
--> 7677 (B) LOCATION:  
--> 7678 (D) OTHER INFORMATION: 11RF primer  
7679  
7680 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:  
7681  
7682 GCTTCATAAG TCACTCTCAT 20  
7683

---

7684 (2) INFORMATION FOR SEQ ID NO:71:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:42

INPUT SET: S26434.raw

7685  
7686  
7687 (i) SEQUENCE CHARACTERISTICS:  
7688 (A) LENGTH: 20 base pairs  
7689 (B) TYPE: nucleic acid  
7690 (C) STRANDEDNESS: single  
7691 (D) TOPOLOGY: linear  
7692  
--> 7693 (A) NAME/KEY:  
--> 7694 (B) LOCATION:  
--> 7695 (D) OTHER INFORMATION: 11RR primer  
7696  
7697 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:  
7698  
7699 TCAAATTCCT CTAACACTCC  
7700

20

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7701 (2) INFORMATION FOR SEQ ID NO:72:  
7702  
7703 (i) SEQUENCE CHARACTERISTICS:  
7704 (A) LENGTH: 35 base pairs  
7705 (B) TYPE: nucleic acid  
7706 (C) STRANDEDNESS: single  
7707 (D) TOPOLOGY: linear  
7708  
7709  
--> 7710 (A) NAME/KEY:  
--> 7711 (B) LOCATION:  
--> 7712 (D) OTHER INFORMATION: 11SF-M13 primer  
7713  
7714 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:  
7715  
7716 TGTAACACGA CGGCCAGTTA CAGCAAGTGG AAAGC  
7717

35

---

7718 (2) INFORMATION FOR SEQ ID NO:73:  
7719  
7720 (i) SEQUENCE CHARACTERISTICS:  
7721 (A) LENGTH: 37 base pairs  
7722 (B) TYPE: nucleic acid  
7723 (C) STRANDEDNESS: single  
7724 (D) TOPOLOGY: linear  
7725  
7726  
--> 7727 (A) NAME/KEY:  
--> 7728 (B) LOCATION:  
--> 7729 (D) OTHER INFORMATION: 11SR-M13 primer  
7730  
7731 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:  
7732  
7733 CAGGAAACAG CTATGACCAA GTTTCAGTTT TACCAAT  
7734

37

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7735 (2) INFORMATION FOR SEQ ID NO:74:

INPUT SET: S26434.raw

7736  
7737 (i) SEQUENCE CHARACTERISTICS:  
7738 (A) LENGTH: 22 base pairs  
7739 (B) TYPE: nucleic acid  
7740 (C) STRANDEDNESS: single  
7741 (D) TOPOLOGY: linear  
7742  
7743  
--> 7744 (A) NAME/KEY:  
--> 7745 (B) LOCATION:  
--> 7746 (D) OTHER INFORMATION: 11TF primer  
7747  
7748 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:  
7749  
7750 GTTCTTCAGA AAATAATCAC TC 22  
7751

7752 (2) INFORMATION FOR SEQ ID NO:75:  
7753  
7754 (i) SEQUENCE CHARACTERISTICS:  
7755 (A) LENGTH: 21 base pairs  
7756 (B) TYPE: nucleic acid  
7757 (C) STRANDEDNESS: single  
7758 (D) TOPOLOGY: linear  
7759  
7760  
--> 7761 (A) NAME/KEY:  
--> 7762 (B) LOCATION:  
--> 7763 (D) OTHER INFORMATION: 11TR primer  
7764  
7765 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:  
7766  
7767 TGTAAAAAGA GAATGTGTGG C 21  
7768

7769 (2) INFORMATION FOR SEQ ID NO:76:  
7770  
7771 (i) SEQUENCE CHARACTERISTICS:  
7772 (A) LENGTH: 39 base pairs  
7773 (B) TYPE: nucleic acid  
7774 (C) STRANDEDNESS: single  
7775 (D) TOPOLOGY: linear  
7776  
7777  
--> 7778 (A) NAME/KEY:  
--> 7779 (B) LOCATION:  
--> 7780 (D) OTHER INFORMATION: 11UF-M13 primer  
7781  
7782 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:  
7783  
7784 TGTA AACGA CGGCCAGTAC TTTTCTGAT GTTCCTGTG 39  
7785

7786 (2) INFORMATION FOR SEQ ID NO:77:

INPUT SET: S26434.raw

7787  
7788 (i) SEQUENCE CHARACTERISTICS:  
7789 (A) LENGTH: 39 base pairs  
7790 (B) TYPE: nucleic acid  
7791 (C) STRANDEDNESS: single  
7792 (D) TOPOLOGY: linear  
7793  
7794  
--> 7795 (A) NAME/KEY:  
--> 7796 (B) LOCATION:  
--> 7797 (D) OTHER INFORMATION: 11UR-M13 primer  
7798  
7799 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:  
7800  
7801 CAGGAAACAG CTATGACCTA AAAATAGTGA TTGGCAACA 39  
7802

---

7803 (2) INFORMATION FOR SEQ ID NO:78:  
7804  
7805 (i) SEQUENCE CHARACTERISTICS:  
7806 (A) LENGTH: 42 base pairs  
7807 (B) TYPE: nucleic acid  
7808 (C) STRANDEDNESS: single  
7809 (D) TOPOLOGY: linear  
7810  
7811  
--> 7812 (A) NAME/KEY:  
--> 7813 (B) LOCATION:  
--> 7814 (D) OTHER INFORMATION: 12F/M13F primer  
7815  
7816 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:  
7817  
7818 TGTAAAACGA CGGCCAGTAG TGGTGTTTTA AAGTGGTCAA AA 42  
7819

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7820 (2) INFORMATION FOR SEQ ID NO:79:  
7821  
7822 (i) SEQUENCE CHARACTERISTICS:  
7823 (A) LENGTH: 40 base pairs  
7824 (B) TYPE: nucleic acid  
7825 (C) STRANDEDNESS: single  
7826 (D) TOPOLOGY: linear  
7827  
7828  
--> 7829 (A) NAME/KEY:  
--> 7830 (B) LOCATION:  
--> 7831 (D) OTHER INFORMATION: 12R/M13R primer  
7832  
7833 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:  
7834  
7835 CAGGAAACAG CTATGACCGG ATCCACCTGA GGTGAGAATA 40  
7836

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7837 (2) INFORMATION FOR SEQ ID NO:80:



RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:47

INPUT SET: S26434.raw

7838  
7839 (i) SEQUENCE CHARACTERISTICS:  
7840 (A) LENGTH: 21 base pairs  
7841 (B) TYPE: nucleic acid  
7842 (C) STRANDEDNESS: single  
7843 (D) TOPOLOGY: linear  
7844  
7845  
--> 7846 (A) NAME/KEY:  
--> 7847 (B) LOCATION:  
--> 7848 (D) OTHER INFORMATION: 13-2F primer  
7849  
7850 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:  
7851  
7852 TAACATTTAA GCATCCGTTA C 21  
7853

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7854 (2) INFORMATION FOR SEQ ID NO:81:  
7855  
7856 (i) SEQUENCE CHARACTERISTICS:  
7857 (A) LENGTH: 28 base pairs  
7858 (B) TYPE: nucleic acid  
7859 (C) STRANDEDNESS: single  
7860 (D) TOPOLOGY: linear  
7861  
7862  
--> 7863 (A) NAME/KEY:  
--> 7864 (B) LOCATION:  
--> 7865 (D) OTHER INFORMATION: 13-2R primer  
7866  
7867 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:  
7868  
7869 AAACGAGACT TTTCTCATAC TGTATTAG 28  
7870

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7871 (2) INFORMATION FOR SEQ ID NO:82:  
7872  
7873 (i) SEQUENCE CHARACTERISTICS:  
7874 (A) LENGTH: 22 base pairs  
7875 (B) TYPE: nucleic acid  
7876 (C) STRANDEDNESS: single  
7877 (D) TOPOLOGY: linear  
7878  
7879  
--> 7880 (A) NAME/KEY:  
--> 7881 (B) LOCATION:  
--> 7882 (D) OTHER INFORMATION: 14F primer  
7883  
7884 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:  
7885  
7886 ACCATGTAGC AAATGAGGGT CT 22  
7887

---

7888 (2) INFORMATION FOR SEQ ID NO:83:

INPUT SET: S26434.raw

7889  
7890 (i) SEQUENCE CHARACTERISTICS:  
7891 (A) LENGTH: 22 base pairs  
7892 (B) TYPE: nucleic acid  
7893 (C) STRANDEDNESS: single  
7894 (D) TOPOLOGY: linear  
7895  
7896  
--> 7897 (A) NAME/KEY:  
--> 7898 (B) LOCATION:  
--> 7899 (D) OTHER INFORMATION: 14AR primer  
7900  
7901 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:  
7902  
7903 GCTTTTGTCT GTTTTCCTCC AA 22  
7904

---

7905 (2) INFORMATION FOR SEQ ID NO:84:  
7906  
7907 (i) SEQUENCE CHARACTERISTICS:  
7908 (A) LENGTH: 21 base pairs  
7909 (B) TYPE: nucleic acid  
7910 (C) STRANDEDNESS: single  
7911 (D) TOPOLOGY: linear  
7912  
7913  
--> 7914 (A) NAME/KEY:  
--> 7915 (B) LOCATION:  
--> 7916 (D) OTHER INFORMATION: 15-2F primer  
7917  
7918 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:  
7919  
7920 CCAGGGGTTG TGCTTTTAA A 21  
7921

---

7922 (2) INFORMATION FOR SEQ ID NO:85:  
7923  
7924 (i) SEQUENCE CHARACTERISTICS:  
7925 (A) LENGTH: 38 base pairs  
7926 (B) TYPE: nucleic acid  
7927 (C) STRANDEDNESS: single  
7928 (D) TOPOLOGY: linear  
7929  
7930  
--> 7931 (A) NAME/KEY:  
--> 7932 (B) LOCATION:  
--> 7933 (D) OTHER INFORMATION: 15FUT/M13-R primer  
7934  
7935 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:  
7936  
7937 CAGGAAACAG CTATGACCAC TCTGTCATAA AAGCCATC 38  
7938

---

7939 (2) INFORMATION FOR SEQ ID NO:86:

INPUT SET: S26434.raw

7940  
7941 (i) SEQUENCE CHARACTERISTICS:  
7942 (A) LENGTH: 24 base pairs  
7943 (B) TYPE: nucleic acid  
7944 (C) STRANDEDNESS: single  
7945 (D) TOPOLOGY: linear  
7946  
7947  
--> 7948 (A) NAME/KEY:  
--> 7949 (B) LOCATION:  
--> 7950 (D) OTHER INFORMATION: 16AF primer  
7951  
7952 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:  
7953  
7954 TTTGGTTTGT TATAATTGTT TTTA 24  
7955

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7956 (2) INFORMATION FOR SEQ ID NO:87:  
7957  
7958 (i) SEQUENCE CHARACTERISTICS:  
7959 (A) LENGTH: 20 base pairs  
7960 (B) TYPE: nucleic acid  
7961 (C) STRANDEDNESS: single  
7962 (D) TOPOLOGY: linear  
7963  
7964  
--> 7965 (A) NAME/KEY:  
--> 7966 (B) LOCATION:  
--> 7967 (D) OTHER INFORMATION: 16AR primer  
7968  
7969 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:  
7970  
7971 CCAACTTTTT AGTTCGAGAG 20  
7972

---

7973 (2) INFORMATION FOR SEQ ID NO:88:  
7974  
7975 (i) SEQUENCE CHARACTERISTICS:  
7976 (A) LENGTH: 19 base pairs  
7977 (B) TYPE: nucleic acid  
7978 (C) STRANDEDNESS: single  
7979 (D) TOPOLOGY: linear  
7980  
7981  
--> 7982 (A) NAME/KEY:  
--> 7983 (B) LOCATION:  
--> 7984 (D) OTHER INFORMATION: 17F primer  
7985  
7986 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:  
7987  
7988 TTCAGTATCA TCCTATGTG 19  
7989

---

7990 (2) INFORMATION FOR SEQ ID NO:89:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:52

INPUT SET: S26434.raw

7991  
7992 (i) SEQUENCE CHARACTERISTICS:  
7993 (A) LENGTH: 20 base pairs  
7994 (B) TYPE: nucleic acid  
7995 (C) STRANDEDNESS: single  
7996 (D) TOPOLOGY: linear  
7997  
7998  
--> 7999 (A) NAME/KEY:  
--> 8000 (B) LOCATION:  
--> 8001 (D) OTHER INFORMATION: 17AR primer  
8002  
8003 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:  
8004  
8005 AGAAACCTTA ACCCATACTG 20  
8006

---

8007 (2) INFORMATION FOR SEQ ID NO:90:  
8008  
8009 (i) SEQUENCE CHARACTERISTICS:  
8010 (A) LENGTH: 39 base pairs  
8011 (B) TYPE: nucleic acid  
8012 (C) STRANDEDNESS: single  
8013 (D) TOPOLOGY: linear  
8014  
8015  
--> 8016 (A) NAME/KEY:  
--> 8017 (B) LOCATION:  
--> 8018 (D) OTHER INFORMATION: 18FUT/M13-AF primer  
8019  
8020 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:  
8021  
8022 TGTAAACCGA CGGCCAGTGA ATTCTAGAGT CACACTTCC 39  
8023

---

8024 (2) INFORMATION FOR SEQ ID NO:91:  
8025  
8026 (i) SEQUENCE CHARACTERISTICS:  
8027 (A) LENGTH: 38 base pairs  
8028 (B) TYPE: nucleic acid  
8029 (C) STRANDEDNESS: single  
8030 (D) TOPOLOGY: linear  
8031  
8032  
--> 8033 (A) NAME/KEY:  
--> 8034 (B) LOCATION:  
--> 8035 (D) OTHER INFORMATION: 18R/M13R primer  
8036  
8037 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:  
8038  
8039 CAGGAAACAG CTATGACCTT TAACTGAATC AATGACTG 38  
8040

---

8041 (2) INFORMATION FOR SEQ ID NO:92:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:54

INPUT SET: S26434.raw

8042  
8043 (i) SEQUENCE CHARACTERISTICS:  
8044 (A) LENGTH: 41 base pairs  
8045 (B) TYPE: nucleic acid  
8046 (C) STRANDEDNESS: single  
8047 (D) TOPOLOGY: linear  
8048  
8049  
--> 8050 (A) NAME/KEY:  
--> 8051 (B) LOCATION:  
--> 8052 (D) OTHER INFORMATION: 19F/M13F primer  
8053  
8054 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:  
8055  
8056 TGTAACACGA CGGCCAGTAA GTGAATATTT TTAAGGCAGT T 41  
8057

---

8058 (2) INFORMATION FOR SEQ ID NO:93:  
8059  
8060 (i) SEQUENCE CHARACTERISTICS:  
8061 (A) LENGTH: 39 base pairs  
8062 (B) TYPE: nucleic acid  
8063 (C) STRANDEDNESS: single  
8064 (D) TOPOLOGY: linear  
8065  
8066  
--> 8067 (A) NAME/KEY:  
--> 8068 (B) LOCATION:  
--> 8069 (D) OTHER INFORMATION: 19FUT/M13-R primer  
8070  
8071 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:  
8072  
8073 CAGGAAACAG CTATGACCAA GAGACCGAAA CTCCATCTC 39  
8074

---

8075 (2) INFORMATION FOR SEQ ID NO:94:  
8076  
8077 (i) SEQUENCE CHARACTERISTICS:  
8078 (A) LENGTH: 38 base pairs  
8079 (B) TYPE: nucleic acid  
8080 (C) STRANDEDNESS: single  
8081 (D) TOPOLOGY: linear  
8082  
8083  
--> 8084 (A) NAME/KEY:  
--> 8085 (B) LOCATION:  
--> 8086 (D) OTHER INFORMATION: 20F/M13F primer  
8087  
8088 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:  
8089  
8090 TGTAACACGA CGGCCAGTCA CTGTGCCTGG CCTGATAC 38  
8091

---

8092 (2) INFORMATION FOR SEQ ID NO:95:

INPUT SET: S26434.raw

8093  
8094 (i) SEQUENCE CHARACTERISTICS:  
8095 (A) LENGTH: 39 base pairs  
8096 (B) TYPE: nucleic acid  
8097 (C) STRANDEDNESS: single  
8098 (D) TOPOLOGY: linear  
8099  
8100  
--> 8101 (A) NAME/KEY:  
--> 8102 (B) LOCATION:  
--> 8103 (D) OTHER INFORMATION: 20R/M13R primer  
8104  
8105 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:  
8106  
8107 CAGGAAACAG CTATGACCAT GTTAAATTCA AAGTCTCTA 39  
8108

---

8109 (2) INFORMATION FOR SEQ ID NO:96:  
8110  
8111 (i) SEQUENCE CHARACTERISTICS:  
8112 (A) LENGTH: 39 base pairs  
8113 (B) TYPE: nucleic acid  
8114 (C) STRANDEDNESS: single  
8115 (D) TOPOLOGY: linear  
8116  
8117  
--> 8118 (A) NAME/KEY:  
--> 8119 (B) LOCATION:  
--> 8120 (D) OTHER INFORMATION: 21F/M13F primer  
8121  
8122 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:  
8123  
8124 TGTAACACGA CGGCCAGTGG GTGTTTATG CTTGGTTCT 39  
8125

---

8126 (2) INFORMATION FOR SEQ ID NO:97:  
8127  
8128 (i) SEQUENCE CHARACTERISTICS:  
8129 (A) LENGTH: 40 base pairs  
8130 (B) TYPE: nucleic acid  
8131 (C) STRANDEDNESS: single  
8132 (D) TOPOLOGY: linear  
8133  
8134  
--> 8135 (A) NAME/KEY:  
--> 8136 (B) LOCATION:  
--> 8137 (D) OTHER INFORMATION: 21R/M13R primer  
8138  
8139 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:  
8140  
8141 CAGGAAACAG CTATGACCCA TTTCAACATA TTCCTTCCTG 40  
8142

---

8143 (2) INFORMATION FOR SEQ ID NO:98:

INPUT SET: S26434.raw

8144  
8145 (i) SEQUENCE CHARACTERISTICS:  
8146 (A) LENGTH: 19 base pairs  
8147 (B) TYPE: nucleic acid  
8148 (C) STRANDEDNESS: single  
8149 (D) TOPOLOGY: linear  
8150  
8151  
--> 8152 (A) NAME/KEY:  
--> 8153 (B) LOCATION:  
--> 8154 (D) OTHER INFORMATION: 22F-1A primer  
8155  
8156 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:  
8157  
8158 AACCACACCC TTAAGATGA 19  
8159

---

8160 (2) INFORMATION FOR SEQ ID NO:99:  
8161  
8162 (i) SEQUENCE CHARACTERISTICS:  
8163 (A) LENGTH: 20 base pairs  
8164 (B) TYPE: nucleic acid  
8165 (C) STRANDEDNESS: single  
8166 (D) TOPOLOGY: linear  
8167  
8168  
--> 8169 (A) NAME/KEY:  
--> 8170 (B) LOCATION:  
--> 8171 (D) OTHER INFORMATION: 22R-1A primer  
8172  
8173 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:  
8174  
8175 GCATTAGTAG TGGATTTTGC 20  
8176

---

8177 (2) INFORMATION FOR SEQ ID NO:100:  
8178  
8179 (i) SEQUENCE CHARACTERISTICS:  
8180 (A) LENGTH: 16 base pairs  
8181 (B) TYPE: nucleic acid  
8182 (C) STRANDEDNESS: single  
8183 (D) TOPOLOGY: linear  
8184  
8185  
--> 8186 (A) NAME/KEY:  
--> 8187 (B) LOCATION:  
--> 8188 (D) OTHER INFORMATION: 23FII primer  
8189  
8190 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:  
8191  
8192 TCACTTCCAT TGCATC 16  
8193

---

8194 (2) INFORMATION FOR SEQ ID NO:101:

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:52:59

INPUT SET: S26434.raw

8195  
8196 (i) SEQUENCE CHARACTERISTICS:  
8197 (A) LENGTH: 17 base pairs  
8198 (B) TYPE: nucleic acid  
8199 (C) STRANDEDNESS: single  
8200 (D) TOPOLOGY: linear  
8201  
8202  
--> 8203 (A) NAME/KEY:  
--> 8204 (B) LOCATION:  
--> 8205 (D) OTHER INFORMATION: 23RII primer  
8206  
8207 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:  
8208  
8209 TGCCAACTGG TAGCTCC 17  
8210

---

8211 (2) INFORMATION FOR SEQ ID NO:102:  
8212  
8213 (i) SEQUENCE CHARACTERISTICS:  
8214 (A) LENGTH: 20 base pairs  
8215 (B) TYPE: nucleic acid  
8216 (C) STRANDEDNESS: single  
8217 (D) TOPOLOGY: linear  
8218  
8219  
--> 8220 (A) NAME/KEY:  
--> 8221 (B) LOCATION:  
--> 8222 (D) OTHER INFORMATION: 24 2F primer  
8223  
8224 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:102:  
8225  
8226 TACAGTTAGC AGCGACAAAA 20  
8227

---

8228 (2) INFORMATION FOR SEQ ID NO:103:  
8229  
8230 (i) SEQUENCE CHARACTERISTICS:  
8231 (A) LENGTH: 38 base pairs  
8232 (B) TYPE: nucleic acid  
8233 (C) STRANDEDNESS: single  
8234 (D) TOPOLOGY: linear  
8235  
8236  
--> 8237 (A) NAME/KEY:  
--> 8238 (B) LOCATION:  
--> 8239 (D) OTHER INFORMATION: 24R/M13R primer  
8240  
8241 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:  
8242  
8243 CAGGAAACAG CTATGACCAT TTGCCAACTG GTAGCTCC 38  
8244

---

8245 (2) INFORMATION FOR SEQ ID NO:104:



RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:53:01

INPUT SET: S26434.raw

8246  
8247 (i) SEQUENCE CHARACTERISTICS:  
8248 (A) LENGTH: 20 base pairs  
8249 (B) TYPE: nucleic acid  
8250 (C) STRANDEDNESS: single  
8251 (D) TOPOLOGY: linear  
8252  
8253  
--> 8254 (A) NAME/KEY:  
--> 8255 (B) LOCATION:  
--> 8256 (D) OTHER INFORMATION: 25F-7/23 primer  
8257  
8258 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:  
8259  
8260 GCTTTCGCCA AATTCAGCTA 20  
8261

---

8262 (2) INFORMATION FOR SEQ ID NO:105:  
8263  
8264 (i) SEQUENCE CHARACTERISTICS:  
8265 (A) LENGTH: 20 base pairs  
8266 (B) TYPE: nucleic acid  
8267 (C) STRANDEDNESS: single  
8268 (D) TOPOLOGY: linear  
8269  
8270  
--> 8271 (A) NAME/KEY:  
--> 8272 (B) LOCATION:  
--> 8273 (D) OTHER INFORMATION: 25R-7/23 primer  
8274  
8275 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:  
8276  
8277 TACCAAAATG TGTGGTGATG 20  
8278

---

8279 (2) INFORMATION FOR SEQ ID NO:106:  
8280  
8281 (i) SEQUENCE CHARACTERISTICS:  
8282 (A) LENGTH: 20 base pairs  
8283 (B) TYPE: nucleic acid  
8284 (C) STRANDEDNESS: single  
8285 (D) TOPOLOGY: linear  
8286  
8287  
--> 8288 (A) NAME/KEY:  
--> 8289 (B) LOCATION:  
--> 8290 (D) OTHER INFORMATION: 26-2F primer  
8291  
8292 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:106:  
8293  
8294 AATCACTGAT ACTGGTTTGG 20  
8295

---

8296 (2) INFORMATION FOR SEQ ID NO:107:

INPUT SET: S26434.raw

8297  
8298 (i) SEQUENCE CHARACTERISTICS:  
8299 (A) LENGTH: 20 base pairs  
8300 (B) TYPE: nucleic acid  
8301 (C) STRANDEDNESS: single  
8302 (D) TOPOLOGY: linear  
8303  
8304  
--> 8305 (A) NAME/KEY:  
--> 8306 (B) LOCATION:  
--> 8307 (D) OTHER INFORMATION: 26-2R primer  
8308  
8309 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:107:  
8310  
8311 TATACTTACA GGAGCCACAT 20  
8312

---

8313 (2) INFORMATION FOR SEQ ID NO:108:  
8314  
8315 (i) SEQUENCE CHARACTERISTICS:  
8316 (A) LENGTH: 18 base pairs  
8317 (B) TYPE: nucleic acid  
8318 (C) STRANDEDNESS: single  
8319 (D) TOPOLOGY: linear  
8320  
8321  
--> 8322 (A) NAME/KEY:  
--> 8323 (B) LOCATION:  
--> 8324 (D) OTHER INFORMATION: 27AF-1A primer  
8325  
8326 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:108:  
8327  
8328 CTGTGTGTAA TATTTGCG 18  
8329

---

8330 (2) INFORMATION FOR SEQ ID NO:109:  
8331  
8332 (i) SEQUENCE CHARACTERISTICS:  
8333 (A) LENGTH: 40 base pairs  
8334 (B) TYPE: nucleic acid  
8335 (C) STRANDEDNESS: single  
8336 (D) TOPOLOGY: linear  
8337  
8338  
--> 8339 (A) NAME/KEY:  
--> 8340 (B) LOCATION:  
--> 8341 (D) OTHER INFORMATION: 27AR/M13R primer  
8342  
8343 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:109:  
8344  
8345 CAGGAAACAG CTATGACGGC AAGTTCTTCG TCAGCTATTG 40  
8346

---

8347 (2) INFORMATION FOR SEQ ID NO:110:

INPUT SET: S26434.raw

8348  
8349 (i) SEQUENCE CHARACTERISTICS:  
8350 (A) LENGTH: 40 base pairs  
8351 (B) TYPE: nucleic acid  
8352 (C) STRANDEDNESS: single  
8353 (D) TOPOLOGY: linear  
8354  
8355  
--> 8356 (A) NAME/KEY:  
--> 8357 (B) LOCATION:  
--> 8358 (D) OTHER INFORMATION: 27BF/M13F primer  
8359  
8360 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:110:  
8361  
8362 TGTAACACGA CGGCCAGTGA ATTCTCCTCA GATGACTCCA 40  
8363

---

8364 (2) INFORMATION FOR SEQ ID NO:111:  
8365  
8366 (i) SEQUENCE CHARACTERISTICS:  
8367 (A) LENGTH: 38 base pairs  
8368 (B) TYPE: nucleic acid  
8369 (C) STRANDEDNESS: single  
8370 (D) TOPOLOGY: linear  
8371  
8372  
--> 8373 (A) NAME/KEY:  
--> 8374 (B) LOCATION:  
--> 8375 (D) OTHER INFORMATION: 27BR/M13R primer  
8376  
8377 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:111:  
8378  
8379 CAGGAAACAG CTATGACCTC TTTGCTCATT GTGCAACA 38  
8380

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# SEQUENCE VERIFICATION REPORT

## PATENT APPLICATION US/09/084,471

DATE: 06/04/98  
TIME: 15:53:15

INPUT SET: S26434.raw

Line	Error	Original Text
17	Number of Sequences (111) Doesn't Equal Actual Count (110)	(iii) NUMBER OF SEQUENCES: 111
6742	Unknown or Misplaced Identifier	(A) NAME/KEY:
6743	Unknown or Misplaced Identifier	(B) LOCATION:
6744	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 2F primer
6750	Sequence 15 missing	(2) INFORMATION FOR SEQ ID NO:16:
6772	Unknown or Misplaced Identifier	(A) NAME/KEY:
6773	Unknown or Misplaced Identifier	(B) LOCATION:
6774	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 3FII primer
6789	Unknown or Misplaced Identifier	(A) NAME/KEY:
6790	Unknown or Misplaced Identifier	(B) LOCATION:
6791	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 3RII primer
6806	Unknown or Misplaced Identifier	(A) NAME/KEY:
6807	Unknown or Misplaced Identifier	(B) LOCATION:
6808	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 4F/M 13F primer
6823	Unknown or Misplaced Identifier	(A) NAME/KEY:
6824	Unknown or Misplaced Identifier	(B) LOCATION:
6825	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 4R-1A primer
6840	Unknown or Misplaced Identifier	(A) NAME/KEY:
6841	Unknown or Misplaced Identifier	(B) LOCATION:
6842	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 5+6F/M13F primer
6857	Unknown or Misplaced Identifier	(A) NAME/KEY:
6858	Unknown or Misplaced Identifier	(B) LOCATION:
6859	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 5+6R/M13R primer
6874	Unknown or Misplaced Identifier	(A) NAME/KEY:
6875	Unknown or Misplaced Identifier	(B) LOCATION:
6876	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 7F/M13F primer
6891	Unknown or Misplaced Identifier	(A) NAME/KEY:
6892	Unknown or Misplaced Identifier	(B) LOCATION:
6893	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 7R/M13R primer
6908	Unknown or Misplaced Identifier	(A) NAME/KEY:
6909	Unknown or Misplaced Identifier	(B) LOCATION:
6910	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 8F/M13F primer
6943	Unknown or Misplaced Identifier	(A) NAME/KEY:
6944	Unknown or Misplaced Identifier	(B) LOCATION:
6945	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 8RIA primer
6960	Unknown or Misplaced Identifier	(A) NAME/KEY:
6961	Unknown or Misplaced Identifier	(B) LOCATION:
6962	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 9F/M13F primer
6977	Unknown or Misplaced Identifier	(A) NAME/KEY:
6978	Unknown or Misplaced Identifier	(B) LOCATION:
6979	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 9R/M13R primer
6994	Unknown or Misplaced Identifier	(A) NAME/KEY:
6995	Unknown or Misplaced Identifier	(B) LOCATION:
6996	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 10AF primer
7011	Unknown or Misplaced Identifier	(A) NAME/KEY:
7012	Unknown or Misplaced Identifier	(B) LOCATION:
7013	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 10AR/M13R primer
7028	Unknown or Misplaced Identifier	(A) NAME/KEY:

SEQUENCE VERIFICATION REPORT  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
TIME: 15:53:17

INPUT SET: S26434.raw

Line	Error	Original Text
7029	Unknown or Misplaced Identifier	(B) LOCATION:
7030	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 10BF/M13F primer
7045	Unknown or Misplaced Identifier	(A) NAME/KEY:
7046	Unknown or Misplaced Identifier	(B) LOCATION:
7047	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 10BR/M13R primer
7080	Unknown or Misplaced Identifier	(A) NAME/KEY:
7081	Unknown or Misplaced Identifier	(B) LOCATION:
7082	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 10CRII primer
7097	Unknown or Misplaced Identifier	(A) NAME/KEY:
7098	Unknown or Misplaced Identifier	(B) LOCATION:
7099	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11AF-M13 primer
7114	Unknown or Misplaced Identifier	(A) NAME/KEY:
7115	Unknown or Misplaced Identifier	(B) LOCATION:
7116	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11AR-M13 primer
7131	Unknown or Misplaced Identifier	(A) NAME/KEY:
7132	Unknown or Misplaced Identifier	(B) LOCATION:
7133	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11BF primer
7148	Unknown or Misplaced Identifier	(A) NAME/KEY:
7149	Unknown or Misplaced Identifier	(B) LOCATION:
7150	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11BR primer
7165	Unknown or Misplaced Identifier	(A) NAME/KEY:
7166	Unknown or Misplaced Identifier	(B) LOCATION:
7167	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11CF primer
7182	Unknown or Misplaced Identifier	(A) NAME/KEY:
7183	Unknown or Misplaced Identifier	(B) LOCATION:
7184	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11CR primer
7199	Unknown or Misplaced Identifier	(A) NAME/KEY:
7200	Unknown or Misplaced Identifier	(B) LOCATION:
7201	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11DF primer
7216	Unknown or Misplaced Identifier	(A) NAME/KEY:
7217	Unknown or Misplaced Identifier	(B) LOCATION:
7218	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11DR primer
7233	Unknown or Misplaced Identifier	(A) NAME/KEY:
7234	Unknown or Misplaced Identifier	(B) LOCATION:
7235	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11EF primer
7250	Unknown or Misplaced Identifier	(A) NAME/KEY:
7251	Unknown or Misplaced Identifier	(B) LOCATION:
7252	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11ER primer
7267	Unknown or Misplaced Identifier	(A) NAME/KEY:
7268	Unknown or Misplaced Identifier	(B) LOCATION:
7269	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11FF primer
7284	Unknown or Misplaced Identifier	(A) NAME/KEY:
7285	Unknown or Misplaced Identifier	(B) LOCATION:
7286	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11FR primer
7301	Unknown or Misplaced Identifier	(A) NAME/KEY:
7302	Unknown or Misplaced Identifier	(B) LOCATION:
7303	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11GF primer
7318	Unknown or Misplaced Identifier	(A) NAME/KEY:

# SEQUENCE VERIFICATION REPORT

## PATENT APPLICATION US/09/084,471

DATE: 06/04/98  
TIME: 15:53:18

INPUT SET: S26434.raw

Line	Error	Original Text
7319	Unknown or Misplaced Identifier	(B) LOCATION:
7320	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11GR primer
7335	Unknown or Misplaced Identifier	(A) NAME/KEY:
7336	Unknown or Misplaced Identifier	(B) LOCATION:
7337	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11HF primer
7370	Unknown or Misplaced Identifier	(A) NAME/KEY:
7371	Unknown or Misplaced Identifier	(B) LOCATION:
7372	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11IF primer
7387	Unknown or Misplaced Identifier	(A) NAME/KEY:
7388	Unknown or Misplaced Identifier	(B) LOCATION:
7389	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11IR primer
7404	Unknown or Misplaced Identifier	(A) NAME/KEY:
7405	Unknown or Misplaced Identifier	(B) LOCATION:
7406	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11JF primer
7421	Unknown or Misplaced Identifier	(A) NAME/KEY:
7422	Unknown or Misplaced Identifier	(B) LOCATION:
7423	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: !!JR primer
7438	Unknown or Misplaced Identifier	(A) NAME/KEY:
7439	Unknown or Misplaced Identifier	(B) LOCATION:
7440	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11KF-M13 primer
7455	Unknown or Misplaced Identifier	(A) NAME/KEY:
7456	Unknown or Misplaced Identifier	(B) LOCATION:
7457	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11KR-M13 primer
7472	Unknown or Misplaced Identifier	(A) NAME/KEY:
7473	Unknown or Misplaced Identifier	(B) LOCATION:
7474	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11LF primer
7489	Unknown or Misplaced Identifier	(A) NAME/KEY:
7490	Unknown or Misplaced Identifier	(B) LOCATION:
7491	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11LR primer
7506	Unknown or Misplaced Identifier	(A) NAME/KEY:
7507	Unknown or Misplaced Identifier	(B) LOCATION:
7508	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11MF primer
7523	Unknown or Misplaced Identifier	(A) NAME/KEY:
7524	Unknown or Misplaced Identifier	(B) LOCATION:
7525	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11MR primer
7540	Unknown or Misplaced Identifier	(A) NAME/KEY:
7541	Unknown or Misplaced Identifier	(B) LOCATION:
7542	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11NF-M13 primer
7557	Unknown or Misplaced Identifier	(A) NAME/KEY:
7558	Unknown or Misplaced Identifier	(B) LOCATION:
7559	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11NR-M13 primer
7574	Unknown or Misplaced Identifier	(A) NAME/KEY:
7575	Unknown or Misplaced Identifier	(B) LOCATION:
7576	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11OF primer
7591	Unknown or Misplaced Identifier	(A) NAME/KEY:
7592	Unknown or Misplaced Identifier	(B) LOCATION:
7593	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11OR primer
7608	Unknown or Misplaced Identifier	(A) NAME/KEY:

SEQUENCE VERIFICATION REPORT  
PATENT APPLICATION US/09/084,471DATE: 06/04/98  
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7610	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11PF primer
7625	Unknown or Misplaced Identifier	(A) NAME/KEY:
7626	Unknown or Misplaced Identifier	(B) LOCATION:
7627	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11PR primer
7642	Unknown or Misplaced Identifier	(A) NAME/KEY:
7643	Unknown or Misplaced Identifier	(B) LOCATION:
7644	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11QF primer
7659	Unknown or Misplaced Identifier	(A) NAME/KEY:
7660	Unknown or Misplaced Identifier	(B) LOCATION:
7661	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11QR primer
7676	Unknown or Misplaced Identifier	(A) NAME/KEY:
7677	Unknown or Misplaced Identifier	(B) LOCATION:
7678	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11RF primer
7693	Unknown or Misplaced Identifier	(A) NAME/KEY:
7694	Unknown or Misplaced Identifier	(B) LOCATION:
7695	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11RR primer
7710	Unknown or Misplaced Identifier	(A) NAME/KEY:
7711	Unknown or Misplaced Identifier	(B) LOCATION:
7712	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11SF-M13 primer
7727	Unknown or Misplaced Identifier	(A) NAME/KEY:
7728	Unknown or Misplaced Identifier	(B) LOCATION:
7729	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11SR-M13 primer
7744	Unknown or Misplaced Identifier	(A) NAME/KEY:
7745	Unknown or Misplaced Identifier	(B) LOCATION:
7746	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11TF primer
7761	Unknown or Misplaced Identifier	(A) NAME/KEY:
7762	Unknown or Misplaced Identifier	(B) LOCATION:
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7778	Unknown or Misplaced Identifier	(A) NAME/KEY:
7779	Unknown or Misplaced Identifier	(B) LOCATION:
7780	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11UF-M13 primer
7795	Unknown or Misplaced Identifier	(A) NAME/KEY:
7796	Unknown or Misplaced Identifier	(B) LOCATION:
7797	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 11UR-M13 primer
7812	Unknown or Misplaced Identifier	(A) NAME/KEY:
7813	Unknown or Misplaced Identifier	(B) LOCATION:
7814	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 12F/M13F primer
7829	Unknown or Misplaced Identifier	(A) NAME/KEY:
7830	Unknown or Misplaced Identifier	(B) LOCATION:
7831	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 12R/M13R primer
7846	Unknown or Misplaced Identifier	(A) NAME/KEY:
7847	Unknown or Misplaced Identifier	(B) LOCATION:
7848	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 13-2F primer
7863	Unknown or Misplaced Identifier	(A) NAME/KEY:
7864	Unknown or Misplaced Identifier	(B) LOCATION:
7865	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 13-2R primer
7880	Unknown or Misplaced Identifier	(A) NAME/KEY:

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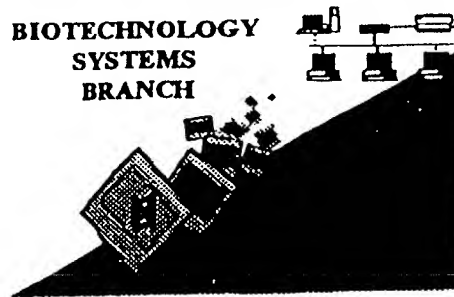
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7898	Unknown or Misplaced Identifier	(B) LOCATION:
7899	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 14AR primer
7914	Unknown or Misplaced Identifier	(A) NAME/KEY:
7915	Unknown or Misplaced Identifier	(B) LOCATION:
7916	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 15-2F primer
7931	Unknown or Misplaced Identifier	(A) NAME/KEY:
7932	Unknown or Misplaced Identifier	(B) LOCATION:
7933	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 15FUT/M13-R primer
7948	Unknown or Misplaced Identifier	(A) NAME/KEY:
7949	Unknown or Misplaced Identifier	(B) LOCATION:
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7965	Unknown or Misplaced Identifier	(A) NAME/KEY:
7966	Unknown or Misplaced Identifier	(B) LOCATION:
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7982	Unknown or Misplaced Identifier	(A) NAME/KEY:
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7984	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 17F primer
7999	Unknown or Misplaced Identifier	(A) NAME/KEY:
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8001	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 17AR primer
8016	Unknown or Misplaced Identifier	(A) NAME/KEY:
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8018	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 18FUT/M13-AF primer
8033	Unknown or Misplaced Identifier	(A) NAME/KEY:
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8035	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 18R/M13R primer
8050	Unknown or Misplaced Identifier	(A) NAME/KEY:
8051	Unknown or Misplaced Identifier	(B) LOCATION:
8052	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 19F/M13F primer
8067	Unknown or Misplaced Identifier	(A) NAME/KEY:
8068	Unknown or Misplaced Identifier	(B) LOCATION:
8069	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 19FUT/M13-R primer
8084	Unknown or Misplaced Identifier	(A) NAME/KEY:
8085	Unknown or Misplaced Identifier	(B) LOCATION:
8086	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 20F/M13F primer
8101	Unknown or Misplaced Identifier	(A) NAME/KEY:
8102	Unknown or Misplaced Identifier	(B) LOCATION:
8103	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 20R/M13R primer
8118	Unknown or Misplaced Identifier	(A) NAME/KEY:
8119	Unknown or Misplaced Identifier	(B) LOCATION:
8120	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 21F/M13F primer
8135	Unknown or Misplaced Identifier	(A) NAME/KEY:
8136	Unknown or Misplaced Identifier	(B) LOCATION:
8137	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 21R/M13R primer
8152	Unknown or Misplaced Identifier	(A) NAME/KEY:



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8169	Unknown or Misplaced Identifier	(A) NAME/KEY:
8170	Unknown or Misplaced Identifier	(B) LOCATION:
8171	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 22R-1A primer
8186	Unknown or Misplaced Identifier	(A) NAME/KEY:
8187	Unknown or Misplaced Identifier	(B) LOCATION:
8188	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 23FII primer
8203	Unknown or Misplaced Identifier	(A) NAME/KEY:
8204	Unknown or Misplaced Identifier	(B) LOCATION:
8205	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 23RII primer
8220	Unknown or Misplaced Identifier	(A) NAME/KEY:
8221	Unknown or Misplaced Identifier	(B) LOCATION:
8222	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 24 2F primer
8237	Unknown or Misplaced Identifier	(A) NAME/KEY:
8238	Unknown or Misplaced Identifier	(B) LOCATION:
8239	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 24R/M13R primer
8254	Unknown or Misplaced Identifier	(A) NAME/KEY:
8255	Unknown or Misplaced Identifier	(B) LOCATION:
8256	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 25F-7/23 primer
8271	Unknown or Misplaced Identifier	(A) NAME/KEY:
8272	Unknown or Misplaced Identifier	(B) LOCATION:
8273	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 25R-7/23 primer
8288	Unknown or Misplaced Identifier	(A) NAME/KEY:
8289	Unknown or Misplaced Identifier	(B) LOCATION:
8290	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 26-2F primer
8305	Unknown or Misplaced Identifier	(A) NAME/KEY:
8306	Unknown or Misplaced Identifier	(B) LOCATION:
8307	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 26-2R primer
8322	Unknown or Misplaced Identifier	(A) NAME/KEY:
8323	Unknown or Misplaced Identifier	(B) LOCATION:
8324	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 27AF-1A primer
8339	Unknown or Misplaced Identifier	(A) NAME/KEY:
8340	Unknown or Misplaced Identifier	(B) LOCATION:
8341	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 27AR/M13R primer
8356	Unknown or Misplaced Identifier	(A) NAME/KEY:
8357	Unknown or Misplaced Identifier	(B) LOCATION:
8358	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 27BF/M13F primer
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8374	Unknown or Misplaced Identifier	(B) LOCATION:
8375	Unknown or Misplaced Identifier	(D) OTHER INFORMATION: 27BR/M13R primer



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